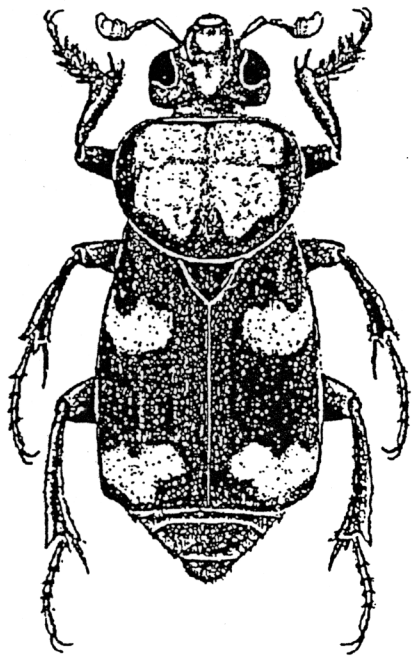
AMERICAN BURYING BEETLE

Nicrophorus americanus



Official Status: Endangered

Endangered species are species that are in danger of extinction throughout all or a significant portion of their range. It is unlawful to kill, harm, or harass endangered species.

Listed: 54 Federal Register 29655; July 13, 1989.

Historical Status: The American burying beetle was formerly found throughout temperate eastern North America. Minnesota, South Dakota, Nebraska, Oklahoma, and Texas are at the western edge of its range.

Present Status: Present American burying beetle numbers may now be as low as fewer than 1,000 individuals in two separate populations. These include a stable population on Block Island off the coast of Rhode Island and a lower density population in eastern Oklahoma. Beetles were collected at Valentine National Wildlife Refuge, Nebraska, in 1992. The last collection in South Dakota was in 1945.

Habitat: The American burying beetle is a large carrion beetle found in areas with an abundance of small bird and mammal carrion. It requires soils that allow it to bury carrion, such as fine sandy loams and silt loams containing a clay component. Historic collections occurred along water courses where riparian deciduous or scrub forests were predominant. Recent capture sites have had relatively level topography, well-drained soils, and a well-formed detritus layer at the ground surface. The beetle appears to have a broad vegetational landscape tolerance.

Life History: Adult beetles are fully nocturnal and are usually active only when nighttime temperatures exceed 60° F. Peak activity occurs between the months of May and September. Adults feed on a broad range of carrion and apparently capture and consume live insects. Reproduction occurs during June and July. Suitably sized carrion (between 100 to 250 grams) is located by the male, and a female is attracted by phermones. The pair bury the carrion in a chamber. Three to 30 eggs are laid in an escape tunnel to the carrion chamber and are defended by at least one adult until the larvae reach at least third instar. Larvae pupate in the soil and emerge as adults in 48-60 days. One brood is raised each year. Adults do not remain viable for more than a year.

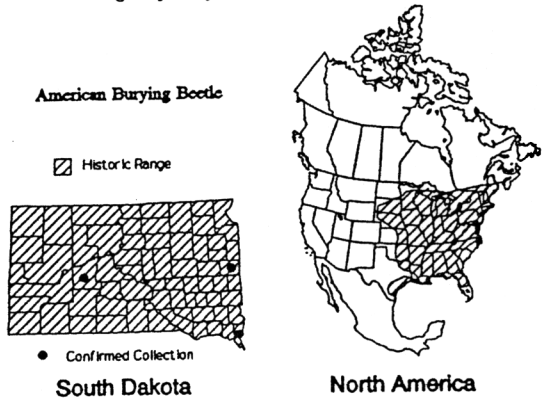
Aid To Identification: The American burying beetle is a black and orange-red beetle measuring 25-35 mm in length. The body is shiny black. The hard front wings (elytra) are also shiny black with two scalloped orange-red spots on each elytron. The pronotum (segment between head and body) has a distinguishing star-shaped orange-red marking. Also, the beetle has orange-red clubbed frons (antenna tips) and a single orange-red facial marking.

Reasons For Decline: The exact reason for the beetles' decline is not known; however, it closely correlates with habitat fragmentation and the decline of important avian species, such as the passenger pigeon and greater prairie chicken. The hatch of these birds coincides with the peak reproductive period of the beetle, and the chicks would provide optimum sized carrion for the beetles' reproductive needs.

Recommendations: Notify the U.S. Fish and Wildlife Service, (605) 224-8693, or the South Dakota Department of Game, Fish and Parks, (605) 773-4345, immediately concerning sightings of these beetles.

Comments: The American burying beetle may have helped to reduce the number of flies and ants in localized areas by burying carrion, making it unavailable to these species.

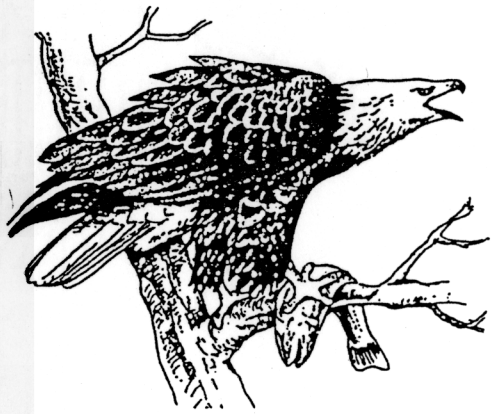
References: *American Burying Beetle Recovery Plan Technical/Agency Draft*, U.S. Fish and Wildlife Service, 1991.



Present distribution of the American Burying Beetle.

Bald Eagle

Haliaeetus leucocephalus



Official Status: Endangered

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Listed: 43 Federal Register 6233; February 14, 1978 (South Dakota and 42 other states).

Historical Status: Bald eagles are thought to have historically nested in all of the lower 48 states. In South Dakota, bald eagles were apparently common along the Missouri River and its tributaries. It is estimated that in the lower 48 states there were 50,000 breeding pairs of bald eagles in pre-colonial times. Due to human activities, the population in the lower 48 states reached a low of 400 breeding pairs in the early 1960's.

Present Status: Bald eagles are abundant in Alaska and Canada. In 1990, there were approximately 2,500 breeding pairs in the lower 48 states. In 1992, the first bald eagle nesting attempt since the late 1800's was reported at the Sand Lake National Wildlife Refuge in Brown County, South Dakota. Two attempts were reported in 1992 at the Karl Mundt National Wildlife Refuge in Gregory County along the Missouri River. Approximately 250 bald eagles winter in South Dakota each year.

Habitat: Bald eagles prefer forested habitats near bodies of water. Eagles concentrate near open water, such as below the tailrace of the Oahe Dam, in the wintertime. Migrating eagles are found throughout South Dakota.

Life History: Sexual maturity for eagles is reached at four to six years of age. Adults mate for life and tend to use the same nest year after year. The majority of nest sites are within 1/2 mile of water. Nests are usually at the top of tall trees, although cliffs are occasionally used. Nests can become enormous, weighing more than a ton. Usually two eggs are laid in a clutch. The eggs hatch after 35 days of incubation. Both parents assist in the feeding of the young. Young leave the nest after 75 days. Bald eagles feed on fish, waterfowl, and other birds, small mammals, and carrion.

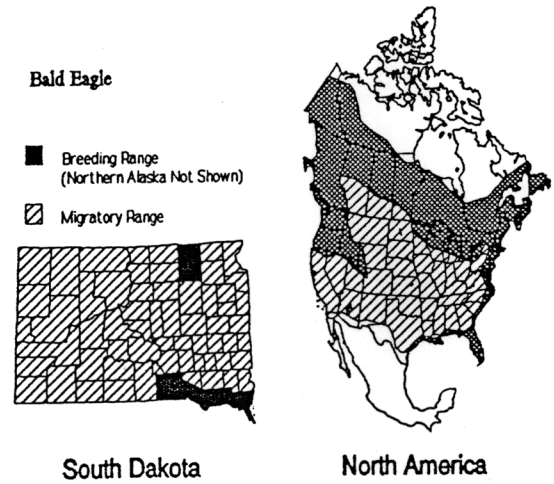
Aid To Identification: The white head and tail of mature bald eagles is an identifying characteristic. Immature birds are more difficult to identify. They are predominately brown with an increasing amount of white mottling as the bird matures. The wingspan of seven feet tends to distinguish the young birds from all other birds, except the golden eagle.

Reasons For Decline: Bald eagle populations declined in the early 20th century due to loss of habitat, shooting, and trapping. During the 1950's and 1960's, the use of pesticides, especially DDT, became a major problem. DDT residues accumulated in fish, a major food source of eagles. The residues then accumulated in the eagles that ate the fish and subsequently caused the thinning of the eggshells. DDT is now banned in the United States. Shooting, trapping, poisoning, electrocution on power lines, and human disturbance continue to be problems. In South Dakota, most of the forest habitat along the Missouri River was destroyed by the main-stem dams. What little forest habitat remains is threatened by clearing in order to build riverside developments.

Recommendations: No human activity should be allowed within one mile of an active nest during breeding season. Stay at least 300 yards from perched or wintering eagles. Wounded or sick eagles should immediately be reported to a wildlife agency. Clearing of waterside forests should be avoided. Report nesting birds to the U.S. Fish and Wildlife Service, (605) 224-8693, or the South Dakota Department of Game, Fish and Parks, (605) 773-4345, immediately.

Comments: In addition to being protected by the Endangered Species Act of 1973, the bald eagle is protected by the Bald Eagle Protection Act of 1940. The bald eagle is the national symbol of the United States.

References: Northern States Bald Eagle Recovery Plan by the U.S. Fish and Wildlife Service, 1983.



Present distribution of the bald eagle.

BLACK-FOOTED FERRET

Mustela nigripes

Used with permission from The Colorado Division of Wildlife

Official Status: Endangered

Endangered species are species that are in danger of extinction throughout all or a significant portion of their range. It is unlawful to kill, harm, or harass endangered species.

Listed:

35 Federal Register 8495; June 2, 1970.

Historical Status:

Black-footed ferrets once ranged throughout the Great Plains. It has been calculated that, if all suitable habitat had been used, as many as 5.6 million black-footed ferrets may have existed in the late 1800's. Populations declined dramatically in the 1900's. A population was located in Mellette County, South Dakota, from 1964-1979. However, the last confirmed sighting in South Dakota was in Todd County in 1979. The last known population was found at Meeteetse, Wyoming, in 1981. The remaining 18 individuals from this population were captured and put into a captive breeding facility in 1987.

Present Status:

From 1987 until 1991, the black-footed ferret may have been extirpated in the wild. In the fall of 1992, 91 captive animals were reintroduced into the wild in Wyoming. The reintroduced animals were designated an "experimental" population. Unconfirmed sightings from other areas continue to be reported. In South Dakota, the majority of the reports come from the southwest part of the state. There are still about 300 black-footed ferrets in captivity. South Dakota is being evaluated for reintroduction sites.

Habitat:

The black-footed ferret inhabits shortgrass prairies, always within close proximity to prairie dog towns.

Life History:

Black-footed ferrets can breed when one year old. Breeding takes place from March to May. Gestation ranges from 41 to 45 days. Typically, there are three to four young per litter. Young black-footed ferrets leave the family group around September. Juvenile males suffer high mortality, a result of their dispersing to new areas. Life expectancies for wild black-footed ferrets are probably less than five years. Prairie dogs comprise 90 percent of the diet of black-footed ferrets. A black-footed ferret family of 4 will consume an average 763 prairie dogs per year. Black-footed ferrets utilize prairie dog burrows for shelter and raising families. Black-footed ferrets are primarily nocturnal. They are active in the winter.

Aid To Identification:

Black-footed ferrets are 20" to 24" long, including a 6" tail, and weigh up to 2½ pounds. They have a yellowish, brown body with a distinctive black mask across the face and have black on the feet and the tip of the tail. The related long-tailed weasel is about half the size of the black-footed ferret and does not have the distinctive black markings.

Reasons For Decline:

The rapid decline of black-footed ferrets has been linked to the eradication of prairie dogs. Prairie dogs now occupy less than two percent of their historic range. Threats to black-footed ferrets also include canine distemper. Black-footed ferrets are susceptible to predation by golden eagles, great-horned owls, badgers, and coyotes. They are also susceptible to road kills and trapping.

Recommendations:

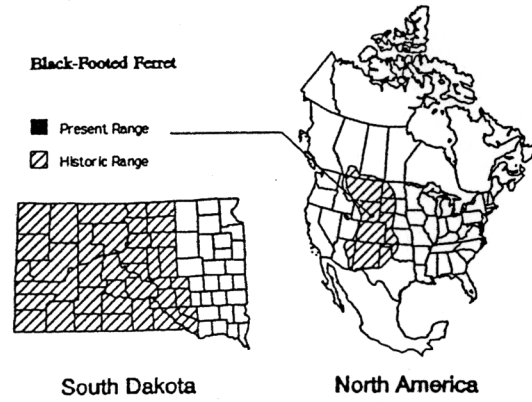
Protect remaining prairie dog communities. It is recommended that individuals contact the U.S. Fish and Wildlife Service before initiating activities that affect prairie dog towns. Report any suspected black-footed ferret sightings to the U.S. Fish and Wildlife Service, (605) 224-8693, or the South Dakota Department of Game, Fish and Parks, (605) 773-4345.

Comments:

Prairie dogs are essential to black-footed ferrets. Prairie dog towns also provide habitat for other rare species, such as mountain plovers, burrowing owls, ferruginous hawks, prairie falcons, and swift fox, and game species like pronghorns.

References:

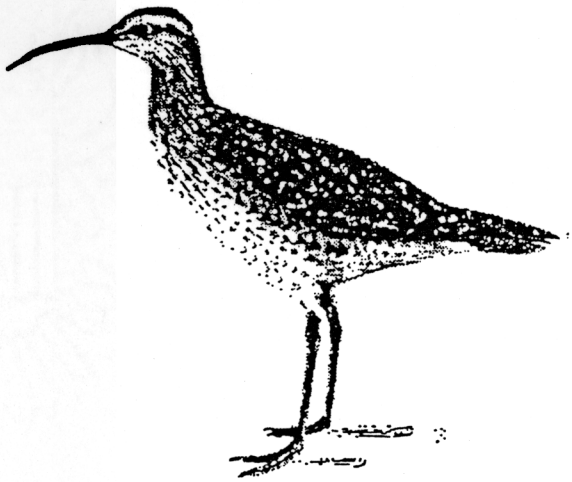
Black-Footed Ferret Recovery Plan by the U.S. Fish and Wildlife Service, 1988. *Handbook of Methods for Locating Black-footed Ferrets*, 1984, and *Black-Footed Ferret Habitat: Some Management and Reintroduction Considerations*, 1985, both published by the Wyoming Game and Fish Commission and the U.S. Bureau of Land Management.



Present and historic distribution of the black-footed ferret.

ESKIMO CURLEW

Numenius borealis



Official Status: Endangered

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Listed: 35 Federal Register; June 2, 1970.

Historical Status: The Eskimo curlew historically wintered in South America near Argentina. In the late 1870's, migrating flocks of several hundred birds could be observed between Fort Randall and Yankton, South Dakota. Spring flights brought these birds to their historical breeding range in the Alaskan and Canadian Arctic. Fall migration took the birds southeast to Labrador then across the Atlantic to South America. By the late 1880's, the species had declined throughout its range. The last confirmed sighting took place in Nebraska in 1987.

Present Status: Today, the Eskimo curlew is considered to be close to extinction. They are protected in the United States by the Endangered Species Act and in Canada by the Migratory Bird Treaty Act. The governments of the United States, Canada, and Argentina are making a cooperative attempt to save the species from extinction.

Habitat: In southeastern South Dakota, Eskimo curlews forage in wet meadow and upland prairie during mid-April to early June. South Dakota is thought to be the last of four traditional spring stopover sites.

Life History: Eskimo curlews nest in the Alaskan and Canadian Arctic from June to August. Nests are typically located in open tundra, lined sparsely with decayed leaves and grasses. Three to four eggs are laid in early June to mid-July. Peak hatch occurs in the last week of June through the first two weeks of July. Beginning in July, they migrate southeast to Labrador, then depart over the Atlantic to the wintering grounds in southern South America. In early March and April, spring migration brings them to the Texas coast, stopping in eastern Oklahoma, central Kansas, south-central Nebraska, and southeastern South Dakota to replenish depleted energy reserves. Eskimo curlews feed upon grasshopper egg pods and grubs while in South Dakota. Berries and snails make up the bulk of the diet on the arctic breeding grounds.

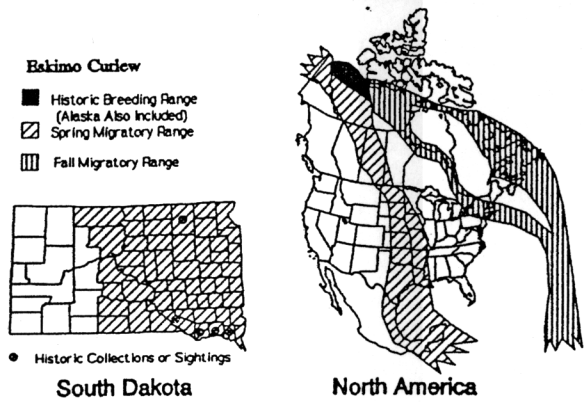
Aid To Identification: The Eskimo curlew is approximately 12 inches in length, with a long, thin, slightly decurved bill, rich cinnamon colored upper parts and underwings, and dark brown head stripes with an indistinct central crown stripe. Its upper parts, including rump and lower back, are brown, mottled brown, or buff colored. The breast and flanks have Y-shaped markings. Its legs are short and bluish-gray. They closely resemble the larger whimbrel, which has a strongly decurved bill, dark upperwing, barred underwing, streaked breast and flanks, and long dull blue-gray or greenish legs.

Reasons For Decline: Loss of wet meadow and prairie habitat and sport shooting along migratory stopover sites are the main reasons for the Eskimo curlew's decline.

Recommendations: Observe all curlew-like birds sighted in southeastern South Dakota during the months of April and May. Protect and restore prairie and wet meadow habitats.

Comments: If you suspect that you have sighted an Eskimo curlew, contact the U.S. Fish and Wildlife Service, (605) 224-8693, or the South Dakota Department of Game, Fish and Parks, (605) 773-4345, immediately.

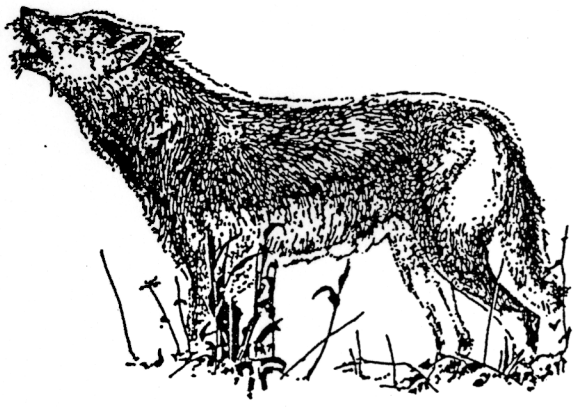
References: *The Birds of South Dakota*, SDOU, Status and Conservation of the Eskimo Curlew, Faanes and Senner.



Historic distribution of the Eskimo Curlew.

GRAY WOLF

Canis lupus



Official Status: Endangered

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Listed: 43 Federal Register 9612; March 9, 1978 (48 conterminous states except Minnesota).

Historical Status: The gray wolf had the greatest distribution of any mammal other than man. The gray wolf was historically found throughout North America, with the exception of parts of the southwestern and southeastern United States. In the southeastern United States, the gray wolf was replaced by the smaller red wolf. The gray wolf was historically present throughout South Dakota where it was known as the Plains wolf, the buffalo wolf, or the lobo wolf.

Present Status: The gray wolf is extirpated from the lower 48 states, with the exception of Minnesota and small populations in Wisconsin, Michigan, Montana, Idaho, and Washington. However, there have been documented occurrences of gray wolves in South Dakota in 1981, 1986, 1989, 1991, and 1992.

Habitat: Historically, the gray wolf occupied almost all habitats in North America, including the Great Plains. In modern times, the gray wolf has been restricted to habitats with low densities of roads and people. Likely habitat for the gray wolf is remote, forested areas. However, they are occasionally sighted in South Dakota, especially in the northeastern portion of the state and along the major river corridors.

Life History: Gray wolves generally do not breed until they are three years of age. Gray wolves breed in late winter. After a gestation period of 63 days, an average litter of 6 pups is born in a den in the ground, rock pile, hollow log, or other shelter. When the pups reach eight weeks of age, the adults may move them to another den. By October, the pups will weigh about 60 pounds and travel with the adults. Young gray wolves usually stay with the adults for two years, forming a pack. At two years of age, gray wolves may disperse hundreds of miles from their original home. Gray wolves usually hunt large animals, such as moose and deer, although beaver and other smaller animals supplement their diet. Gray wolves are often more successful taking old, weak, or injured prey. Gray wolves are territorial and will keep other gray wolves and coyotes out of their 50-100 mile^2 home range. Howling is a way for pack members to communicate.

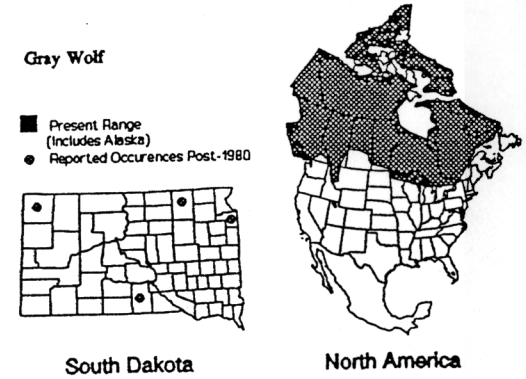
Aid To Identification: Gray wolves can range in color from white to black, although gray is the predominant color. Mature gray wolves generally weigh from 70-115 pounds and stand about 30 inches high at the shoulder. Coyotes are considerably smaller than gray wolves, usually weighing less than 35 pounds. A good field guide is that gray wolves will be larger than a typical German shepherd while coyotes will be smaller. The track of a gray wolf will be about 5 inches long compared to 3 inches for a coyote track. Some dogs, such as Great Danes, can have tracks as large as a gray wolf.

Reasons For Decline: Gray wolves have been exterminated by man throughout most of their original range. Shooting, trapping, and poisoning were often subsidized by the government. Illegal shooting continues to be a problem.

Recommendations: Reports or signs of gray wolves should be reported to the U.S. Fish and Wildlife Service, (605) 224-8693, or the South Dakota Department of Game, Fish and Parks, (605) 773-4345.

Comments: There are no known gray wolf attacks on humans in modern times in North America. Gray wolves do take livestock, although the occurrences are rare. In gray wolf range in Minnesota, gray wolves take only 1 of every 2,000 cattle. Most gray wolves avoid livestock. Some states have programs that reimburse livestock owners for wolf damage.

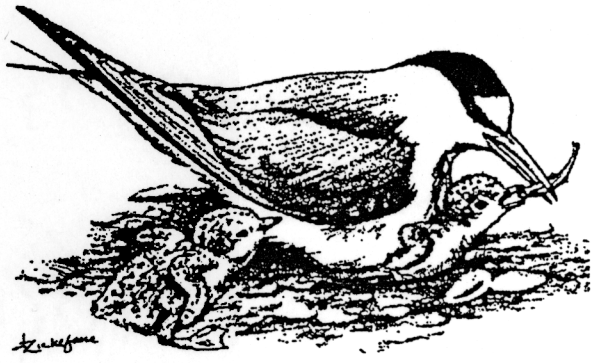
References: *Wolf! A Modern Look* by Wolves in American Culture Committee, 1986.



Present range of the gray wolf.

LEAST TERN

Sterna antillarum



Official Status: Endangered (South Dakota)
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Listed: 50 Federal Register 21792; May 28, 1985 (interior population of the least tern).

Historical Status: Historically, the least tern was found on the Atlantic, Gulf of Mexico and California coasts and on the Mississippi, Missouri, and Rio Grande River systems. It was found throughout the Missouri River system in South Dakota.

Present Status: The interior population of the least tern presently breeds in the Mississippi, Missouri and Rio Grande River systems. The birds usually stay in close proximity to the rivers. Census data indicate that there are presently about 2,500 breeding pairs of least terns in the interior population. Birds from the interior population winter along the Gulf of Mexico and on Caribbean Islands. In South Dakota, the least tern is found mainly on the Missouri and Cheyenne Rivers. There are approximately 200 breeding pairs in South Dakota.

Habitat: In South Dakota the least tern utilizes sparsely vegetated sandbars and beaches of the Missouri and Cheyenne Rivers. Birds nest, raise young, and relax on barren river sandbars and beaches.

Life History: The breeding season for the interior population of the least tern lasts from May through August. The peak of the nesting season occurs from mid-June to mid-July. Nests are bowl shaped depressions, about 4" across, on barren, sandy areas. Least terns nest in colonies where the nests can be as close as a few feet apart. A typical clutch contains 2 to 3 eggs and takes about 24 days to hatch. Both parents incubate the eggs and feed the young. Young are able to fly in about 21 days. Least terns typically live 1 to 5 years. Terns forage for small fish in the river and nearby wetlands.

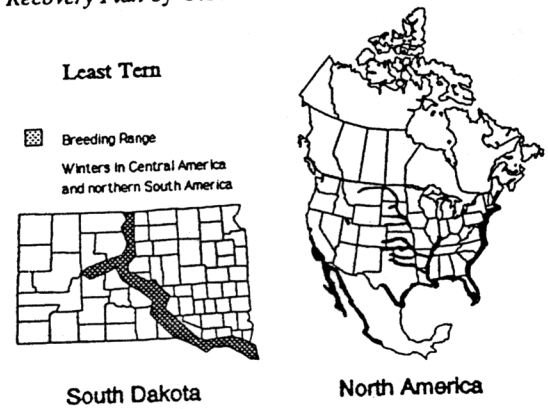
Aid to identification: Least terns are the smallest member of the gull and tern family. They are approximately 9" in length. Unlike gulls, terns will dive into the water for small fish. The body of least terns is predominately gray and white with black streaking on the head. Least terns have a forked tail and narrow pointed wings. Least terns less than a year old have less distinctive black streaking on the head and less of a forked tail.

Reasons for decline: The interior population of the least tern has declined due to loss of habitat from dam construction and river channelization on major rivers throughout the Mississippi, Missouri, and Rio Grande River systems. Terns utilizing the remaining sandbars on the Missouri River are susceptible to human activities, predation, and water fluctuations as the result of dam operations. Cold water temperatures due to reservoirs also affect the quantity of forage fish available.

Recommendations: Avoid Cheyenne and Missouri River sandbars and beaches that have least terns present. Adult birds with eggs or young nearby will squeal loudly while circling overhead, and may swoop down at the intruder. Leave the area immediately. Advise others to avoid the area. Notify the U.S. Fish and Wildlife Service (605) 224-8693 or the South Dakota Department of Game, Fish and Parks (605) 773-4345 immediately.

Comments: Biologists are uncertain about whether least tern populations from the Atlantic coast, California coast, and interior North America are separate subspecies or simply separate populations. For purposes of the Endangered Species Act, the U.S. Fish and Wildlife Service has assigned the endangered status to the interior population of the least tern. The California population of the least tern has been listed as endangered since 1970. The Atlantic population is not listed. Least terns in South Dakota will often be found sharing sandbars with the piping plover, a threatened species.

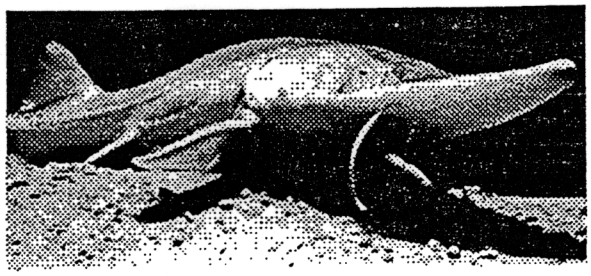
References: *Interior Population of the Least Tern Recovery Plan* by U.S. Fish and Wildlife Service, 1990.



Present breeding distribution of the three populations of the least tern.

PALLID STURGEON

Scaphirhynchus albus



Official Status: Endangered

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Listed: 55 Federal Register 36641; September 6, 1990.

Historical Status: Pallid sturgeon were not identified as a separate species until 1905. Because of that, the historical data are sparse. However, catch records indicate that pallid sturgeon were somewhat common as late as the 1950's and 1960's. Observation data from the Missouri River and its tributaries in the Dakotas and Montana reflect the downward trend of the population. In the 1960's, there was an average of 50 observations per year; in the 1970's, there was an average of 21 observations per year; and in the 1980's, there was an average of only 6 observations per year.

Present Status: Pallid sturgeon are found in the Mississippi and Missouri Rivers and their larger tributaries. Total length of the historic range is approximately 3,550 river miles; however, only portions of this range are presently suitable pallid sturgeon habitat. In South Dakota, fishermen on the Missouri River occasionally catch pallid sturgeon. Although no reproduction has been documented in South Dakota in more than a decade, adults have been located below the Oahe and Fort Randall Dams in 1992.

Habitat: Pallid sturgeon are adapted for living close to the bottom of large, silty rivers with swift currents. The preferred habitat is comprised of sand flats and gravel bars.

Life History: Male pallid sturgeon do not appear to be sexually mature until they reach at least 5 to 7 years of age, and females do not appear to be sexually mature under they reach at least 15 to 20 years. Spawning occurs from June through July over gravel or other hard surfaces. The eggs take five to eight days to hatch. Both male and female sturgeon may go three to ten years between spawnings. Pallid sturgeon are long lived, with individuals reaching perhaps 50 years of age. Pallid sturgeon feed on aquatic insects, mollusks, and small fishes.

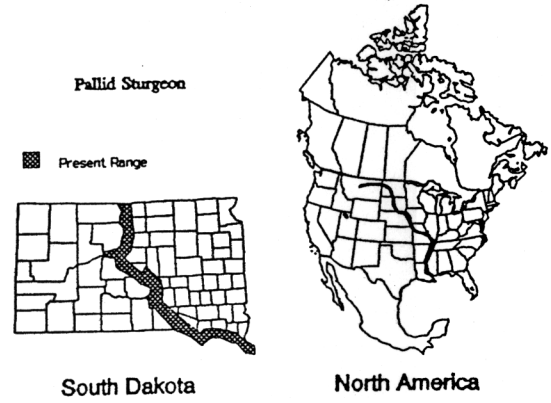
Aid To Identification: Pallid sturgeon are armored with lengthwise rows of bony plates and have a "shark-like" appearance. The range of the pallid sturgeon in South Dakota overlaps the range of the shovelnose sturgeon. Pallid sturgeon can weigh up to 80 pounds, while shovelnose sturgeon reach a maximum weight of five pounds and average two pounds. The back and sides of the pallid sturgeon are grayish-white versus the brown color of the shovelnose sturgeon. The length of the inner barbels (four whisker-like appendages in front of the mouth) on a pallid are only about half as long as the outer barbels while, on the shovelnose, all barbels are the same length. Pallid sturgeons are known to hybridize with the smaller shovelnose sturgeon.

Reasons For Decline: Of the 3,550 river miles that the pallid sturgeon inhabits, all have been significantly affected by man. Approximately 28 percent of the affected area has been impounded, which has created unsuitable lake-like habitat, 51 percent of the area has been channelized, and the remaining 21 percent of the historic habitat is below dams. In the latter 21 percent, the water released from dams has reduced silt loads and caused different runoff patterns and colder temperatures, all of which are believed to be detrimental to pallid sturgeon. Commercial fishing may have also played a role in the pallid sturgeon's decline.

Recommendations: All species of sturgeon caught in South Dakota must be released immediately. Contact the U.S. Fish and Wildlife Service, (605) 224-8693, or the South Dakota Department of Game, Fish and Parks, (605) 773-4345, with information on any pallid sturgeon that you catch.

Comments: Pallid sturgeon are an ancient species of fish that was in existence long before the advent of man. Like other ancient fish, pallid sturgeon have a skeleton of cartilage rather than true bones. Sturgeon are the common source of caviar, although the pallid sturgeon was rarely used for this purpose.

References: The *Pallid Sturgeon Recovery Plan* is in preparation by the North Dakota State Office of the U.S. Fish and Wildlife Service. A *Pallid Sturgeon Recovery Update* is available from the same office (1500 Capitol Avenue, Bismarck, North Dakota 58501) (701-250-4491).



Present distribution of the pallid sturgeon.

PEREGRINE FALCON

Falco peregrinus anatum

Official Status: Endangered

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Listed: 35 Federal Register 8495; June 2, 1970.

Historical Status: The peregrine falcon was historically found on all continents except Antarctica. Most of the historic nesting records in South Dakota are from Pennington and Harding Counties. Peregrine falcons have not nested in South Dakota since 1960.

Present Status: Peregrine falcon populations are reduced worldwide. Breeding populations have been extirpated in large portions of the United States. In South Dakota, transient birds are occasionally reported. In the summer of 1979, a pair of peregrine falcon chicks were successfully fledged in the Black Hills by a cross-foster recipient prairie falcon. However, cross-fostering is no longer considered a viable method of hacking peregrine falcons.

Habitat: Peregrine falcons will use almost any habitat type that provides hunting opportunities, particularly open areas such as wetlands, grasslands, and cropland. For nesting purposes, peregrine falcons prefer habitats with cliffs. Peregrine falcons have been known to nest and hunt in cities with tall buildings.

Life History: Sexual maturity occurs at three years of age. Peregrine falcons usually nest in depressions on the edge of cliffs. These sites are known as aeries. Some aeries in Europe have been occupied for more than 300 years. Peregrine falcons may use nests built by eagles, hawks, or other birds. Peregrine falcons have also nested on tall buildings. A clutch of three to four eggs is laid in April. Incubation lasts about 33 days with both adults partaking in incubating and feeding the young. Young birds can fly in 35 to 42 days. Prey of peregrine falcons consist of pigeons, ducks, blackbirds, and other birds. Peregrine falcons swoop down on their prey and strike it with their talons. Peregrine falcons may be the fastest animals in the world, reaching speeds up to 200 miles per hour in a dive.

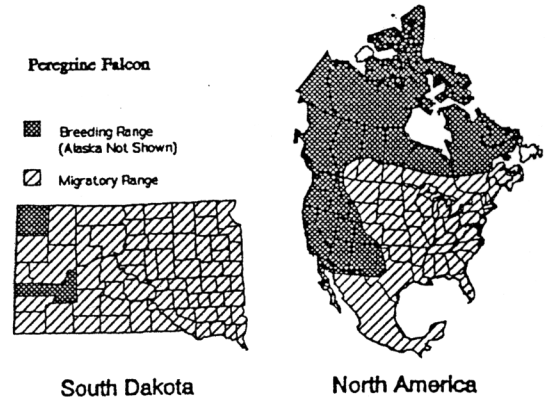
Aid To Identification: Peregrine falcons are the size of a crow. They have a dark blue to slate gray back, white throat, black facial markings, and spotted or barred belly. They have long, pointed wings and rapid wingbeats. Peregrine falcons can be identified from prairie falcons and merlins by their larger size and more distinct facial markings.

Reasons For Decline: A rapid decline occurred in the 1950's and 1960's due primarily to egg-shell thinning caused by accumulation of pesticide by-products, especially those from DDT. DDT was banned in the United States in 1973. Presently, the loss of habitat, human disturbance, shootings, pesticides, and energy development pose threats.

Recommendations: Do not disturb active nests. Report any sightings, injured birds, or suspected nests to the U.S. Fish and Wildlife Service, (605) 224-8693, or the South Dakota Department of Game, Fish and Parks, (605) 773-4345.

Comments: The subspecies of peregrine falcon found in South Dakota is the American peregrine falcon. Arctic peregrine falcons occasionally migrate through South Dakota at which time they are listed as endangered. Peregrine falcons have been raised in captivity and then released into the wild (known as hacking). Peregrine falcons are used in falconry.

References: *American Peregrine Falcon Recovery Plan (Rocky Mountain Southwest Populations)* by U.S. Fish and Wildlife Service, 1984.



Breeding and migratory distribution of the peregrine falcon.

WESTERN PRAIRIE FRINGED ORCHID

Platanthera praeclara

flower actual size

Official Status: Threatened

Threatened species are species that are likely to become endangered species within the foreseeable future throughout all or a significant portion of their range.

Listed:

54 Federal Register 39863; September 28, 1989.

Historical Status:

The Western prairie fringed orchid was historically found throughout the tallgrass regions of North America. This included the Dakotas, Nebraska, Kansas, Oklahoma, Missouri, Iowa, Minnesota, and Manitoba. The Mississippi River was the eastern limit of its range.

Present Status:

According to county records, the Western prairie fringed orchid has experienced at least a 60 percent decline from historic times. Presently, there are at least 37 separate populations remaining in 7 states. It appears to have been extirpated from South Dakota. However, since populations still exist in counties adjacent to South Dakota in the states of North Dakota, Minnesota, Iowa, and Nebraska, it is possible that remote populations in South Dakota have been overlooked.

Habitat:

The Western prairie fringed orchid occurs in moist tallgrass prairies and sedge meadows. It is commonly found with sedges, reedgrass, and rushes or where those plants meet big bluestem, little bluestem, and switchgrass. The Western prairie fringed orchid is well adapted to survive fires. It does not appear that light grazing negatively affects the Western prairie fringed orchid, although researchers are still studying the relationship. Suitable habitat in South Dakota includes tallgrass calcareous silt loam prairie and sub-irrigated sand prairie. Historical locations include areas of the Big Sioux River Valley in the southeastern part of the state.

Life History:

The vegetative shoots of the Western prairie fringed orchid emerge in late May. Flowers do not emerge until mid June to late July. The entire plant can display flowers for about 21 days with individual flowers lasting up to 10 days. Flowers must be pollinated for seed production. Pollination of the Western prairie fringed orchid appears to be accomplished only by hawkmoths. The microscopic seeds are dispersed by the wind in early fall. The Western prairie fringed orchid is a perennial which means that an individual plant may live for many years.

Aid To Identification:

The Western prairie fringed orchid is distinguished by large, white flowers that come from a single stem. Up to 20 flowers may occur on a single plant. The flower is fringed on the margins, giving it a feathery appearance. The Western prairie fringed orchid grows up to three feet high. The two to five leaves are narrow and hug the stem.

Reasons For Decline:

The main reason for the decline is that historic prairie habitat has been converted to cropland and tame pasture. Herbicides and the introduced plant, leafy spurge, may also have a negative effect on the Western prairie fringed orchid. Heavy grazing and early haying can also be detrimental.

Recommendations:

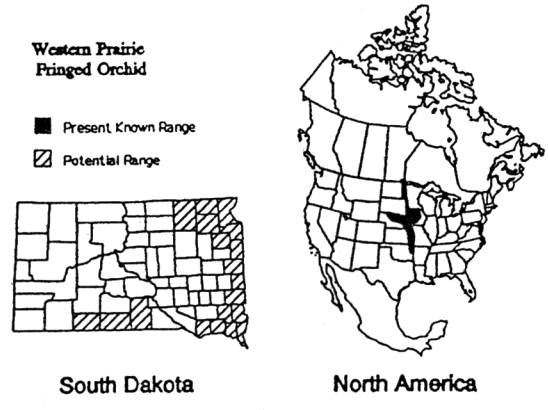
Notify the U.S. Fish and Wildlife Service, (605) 224-8693, or the South Dakota Department of Game, Fish and Parks, (605) 773-4227, of any suspected Western prairie fringed orchids. This includes populations that were visible in the past but have not recently been observed.

Comments:

The Eastern prairie fringed orchid is similar to the Western prairie fringed orchid; however, it inhabits primarily areas east of the Mississippi River. The Eastern prairie fringed orchid is also listed as a threatened plant.

References:

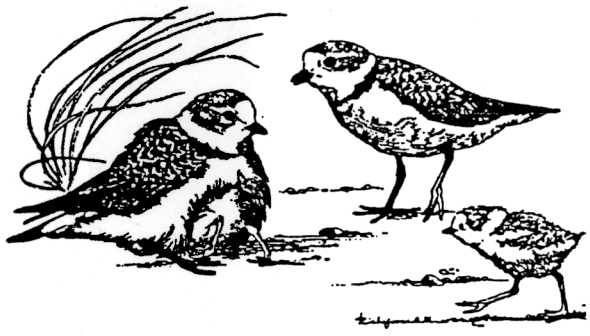
A recovery plan for the Western prairie fringed orchid is in preparation (U.S. Fish and Wildlife Service). *Western Prairie Fringed Orchid* by Minnesota Department of Natural Resources, 1991.



Present distribution of the Western prairie fringed orchid.

PIPING PLOVER

Charadrius melodus



Official Status: Threatened

Threatened species are species that are likely to become endangered species within the foreseeable future throughout all or a significant portion of their range.

Listed: 50 Federal Register 50733; December 11, 1985.

Historical Status: It appears that the piping plover was more widespread than its present distribution. This may be especially true for the Great Lakes population. Historically, there are breeding records for 21 South Dakota counties.

Present Status: There are three distinct piping plover populations in North America. They are the Atlantic Coast, Great Lakes, and Great Plains populations. A 1991 international census estimated a total piping plover population of 2,337 breeding pairs. Data on wintering sites and migratory routes are sparse, although it seems that the majority of the birds winter on southern Atlantic coastal beaches, along the Gulf of Mexico, and on scattered Caribbean islands. The Great Plains population is comprised of the states of North and South Dakota, Nebraska, Montana, Iowa, Colorado, Minnesota, and the provinces of Alberta, Manitoba, Saskatchewan, and Ontario. The estimated number of breeding pairs in this population was 1,372 in 1991. The South Dakota population was estimated at 141 breeding pairs in 1991. The South Dakota pairs were found primarily along the Missouri River, while one pair was found on Lake Thompson in Kingsbury County. The South Dakota population appears to winter primarily along the Gulf of Mexico.

Habitat: In the Great Plains, piping plovers utilize the barren sand and gravel shores of rivers and lakes. Plovers avoid areas with dense vegetation. Generally speaking, the wetlands used by plovers in South Dakota are saline in nature and have salt-encrusted, white beaches. The selection of alkaline lakes is probably a consequence of the sparse vegetation around these lakes. Beaches used by piping plovers will generally average 30 yards in width. Piping plovers also utilize barren river sandbars. In South Dakota, this habitat type is found on the Missouri River.

Life History: The breeding season in South Dakota extends from late April until August. Pairs remain mated for the duration of the breeding season. Pairs are territorial, which means they defend their nest area from other plovers. Both sexes share the incubation duties, which last from 25 to 31 days. A four-egg clutch is laid in a shallow depression in the sand/gravel substrate. Plover chicks are able to walk and feed within hours of hatching. The chicks can fly in about 21 days. Piping plovers feed on insects, crustaceans, and mollusks.

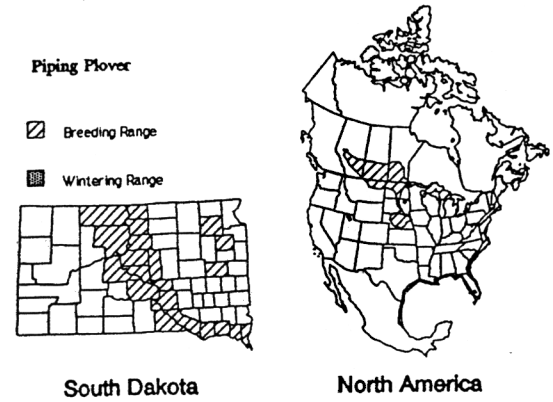
Aid To Identification: The piping plover is a small shorebird the color of dry sand. Distinctive markings include a black band on top of the head and another across the breast. The similar killdeer has two black breastbands. The black bands are not well formed in juvenile piping plovers and in birds in winter plumage. Piping plovers have a melodic flute-like call.

Reasons For Decline: Habitat destruction is a major reason for the population decline. In South Dakota, the construction of reservoirs on the Missouri River has resulted in a loss of sandbar habitat. Plovers utilizing the remaining sandbars on the Missouri River are susceptible to human activities, predation, and water fluctuations as the result of dam operations. Plovers that use alkaline wetlands are susceptible to cattle trampling, wetland drainage, and contaminants.

Recommendations: Avoid Missouri River sandbars and alkaline wetlands that have piping plovers present. Leave the area immediately if piping plovers are observed. Advise others to do likewise. Restrain pets when near piping plovers. Notify the U.S. Fish and Wildlife Service, (605) 224-8693, or the South Dakota Department of Game, Fish and Parks, (605) 773-4345, immediately.

Comments: Piping plovers on river sandbars often share the sandbars with least terns, an endangered species. Piping plovers in the Great Lakes watershed are listed endangered.

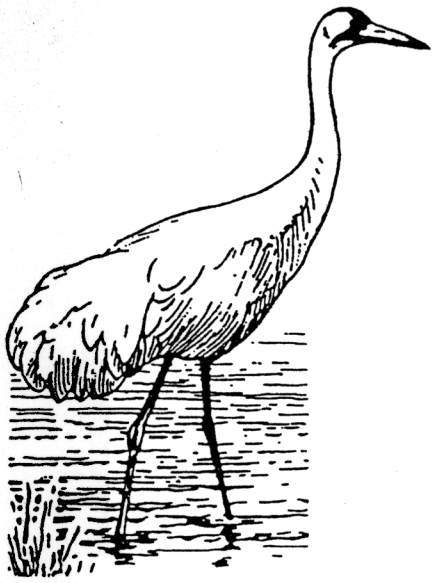
References: *Great Lakes & Northern Great Plains Piping Plover Recovery Plan* by U.S. Fish and Wildlife Service, 1988.



Present distribution of the piping plover.

WHOOPING CRANE

Grus americana



Official Status: Endangered

Endangered species are species that are in danger of extinction throughout all or a significant portion of their range. It is unlawful to kill, harm, or harass endangered species.

Listed: 35 Federal Register 8495; June 2, 1970.

Historical Status: The historical breeding range of the whooping crane extended from Illinois, northwest through eastern North Dakota, and up to the Northwest Territories. The birds historically wintered along the Gulf of Mexico. By 1941, there were only an estimated 16 whooping cranes left in the world. All were from a flock that wintered at the Aransas National Wildlife Refuge on the coast of Texas. It was later discovered that the birds were breeding in Wood Buffalo National Park in the Northwest Territories.

Present Status: There are presently about 145 whooping cranes in the wild. About 132 birds are in the Aransas-Wood Buffalo flock, and 13 birds are in a flock that migrates between Grays Lake National Wildlife Refuge in Idaho and Bosque del Apache National Wildlife Refuge in New Mexico. The Aransas-Wood Buffalo population migrates through South Dakota. These whooping cranes are predictable spring and fall migrants, often traveling with large flocks of sandhill cranes along the Missouri River drainage in late September to mid October and then again in late April to mid-June. Although most sightings occur along the river and in the western part of the state, migrating whooping cranes often travel through the eastern part of South Dakota.

Habitat: Whooping cranes inhabit shallow wetlands that are characterized by cattails, bulrushes, and sedges. They can also be found in grassland and cropland areas, especially during migration.

Life History: Whooping cranes may live up to 20 years and do not appear to reach sexual maturity until their second or third year. Courtship occurs at Wood Buffalo National Park in late April and May. Courtship rituals are eccentric with the pair performing loud vocalizations, wing flapping, head bowing, and leaps into the air. Whooping cranes mate for life. Two eggs are laid in a nest made of bulrush and other vegetation. Incubation is about 29 days. Both parents incubate the eggs and feed the young. Usually only the larger chick survives. Young cranes are capable of flight in about 90 days. Whooping cranes feed on crabs, crayfish, frogs, and other small aquatic life as well as plants.

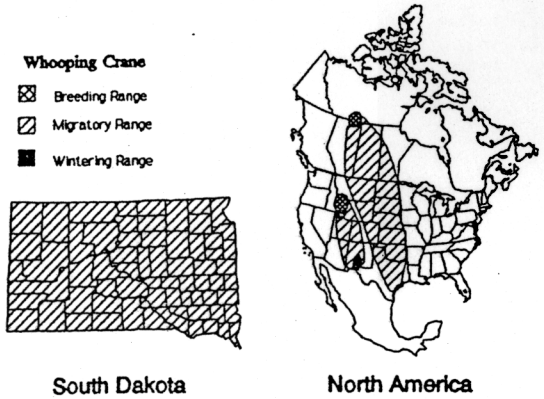
Aid To Identification: The whooping crane is the tallest bird in North America, with a height of five feet and a wingspan of seven feet. It is a white bird with black wingtips and red markings on the head. Young birds have a brown-mottled appearance until their second summer. Whooping cranes fly with a slow downward flap and a rapid upstroke. Whooping cranes may migrate with the smaller, gray, sandhill crane. Their trumpet like call carries for miles.

Reasons For Decline: Loss of habitat and shooting are the main reasons for the whooping crane's decline.

Recommendations: Watch for migrating whooping cranes in the spring and fall. Many of the wild whooping cranes are marked with colored leg bands. Make observations of these birds and report them to the U.S. Fish and Wildlife Service, (605) 224-8693, or the South Dakota Department of Game, Fish and Parks, (605) 773-4345.

Comments: The status of whooping cranes in the wild is precarious because the birds concentrate during the winter. Oil spills in the Gulf of Mexico are a potential threat. Eggs from wild birds (one per nest) have been removed and hatched in captivity. The captive birds are now reproducing.

References: *Whooping Crane Recovery Plan* by U.S. Fish and Wildlife Service.



Present distribution of the whooping crane.